TEACHERS' RETIREMENT BOARD

REGULAR MEETING

SUBJECT: State Teachers' Automation Redesign Team (START) Project Update

ITEM NUMBER: 6

ATTACHMENT(S) 2

ACTION: ___

DATE OF MEETING: September 7, 2000

INFORMATION: X

PRESENTER(S): Ken Costa

This report covers the period of June 2000 and July 2000 for the START Project. Work continues on the finalization of specifications, development of software, testing of software and conversion of data and implementation tasks.

Testing Team

Subsystem Testing is 97% percentage complete and Integration Testing is 92% complete, resulting in a total of 94% complete for overall testing of the START Project. The actual task of executing the test scripts is 91% complete.

Testing with converted data is proceeding according to plan. Side by side comparisons between START and IDMS and automated testing using WorldGroup's load modules have revealed some minor problems which have been corrected by Conversion team. Execution of subsystem and integration testing scripts is also underway, and has not yet revealed any major problems. The effort is scheduled to be completed by September 30 (this date has changed from the original plan due to a change in the conversion data delivery schedule).

The next START testing assessment will be delivered prior to the start of the final Conversion trial run. Current due date for the assessment is September 22, 2000.

Two new contract testers have been hired for the Reporting Interactions Subsystem (RI) Testing efforts. A test plan for RI identifying critical milestones was developed and is underway. This test plan will assist CalSTRS management in the assessment of the RI subsystem and its readiness to go live.

Conversion Team

The conversion of benefit stream data has identified many data integrity issues within the current IDMS database, which must be addressed in order for conversion to continue with the pre-trial conversion. Business areas have been involved in the decision making process when issues are identified. Information Technology Services Division (ITSD) has been instrumental in resolving and creating data fix programs in conjunction with the Conversion Team. At this point, the remainder of the benefit stream data fallout must be analyzed and programmatic fixes (where possible) applied in order for the pre-trial data to be successfully converted into START. The first trial run (referred to as the pre) is behind schedule with approximately 70% of the data converted.

An additional trial run (referred to as T1) has begun running concurrently with the pre-trial run. The purpose of T1 is to pick up changes to the system that have occurred as a result of incident fixes and enhancements occurring throughout the running of the pre-trial run and to fine tune the conversion process in order to meet the downtime window. It is expected that additional data cleanup will be identified as a result, but the amounts will be minimal as the first pass of the pre-trial run identified and resolved many data issues. These data issues resulted in data fix programs that can be run again by ITSD to capture and resolve the same type of data issues previously identified.

The project schedule remains aggressive for the completion of conversion. The biggest risk to conversion at this point is the integrity of the IDMS data and secondarily, the changes to the START system resulting from future incidents and design changes.

Implementation Team

The Training Team has been working closely with CalSTRS management on the training phase progress. Staff training estimates are being refined based on management feedback and training pilot results. Lesson and checksheet development continues to be behind schedule due to training resources redirected to higher priority project areas. To help reduce the impact of the resource redirection, lessons are being prioritized based on business needs and an outside contractor has been hired to work with the Training Team.

The User Acceptance Team has concluded the initial impact analysis of postponed functional changes. To date, the results of the impact analysis confirm most areas of the business will not have an increased workload due to the postponement of these requested changes. To ensure that the START system is secured, the project team has developed system security profiles for the business. User Acceptance activities to review and approve these security profiles are currently being addressed.

The START Model Office Team is progressing with the testing of all the necessary components for the START production environment. A new team lead for Model Office has taken over the coordination tasks including the development of a new workplan. The key activities within the workplan include

- Establishing procedures to control Model Office execution;
- Working with the business staff defining their role in Model Office;
- Setting up the Model Office Project room;
- Setting up the Model Office test environment including installation of equipment.

The Event Schedule is still in the process of being developed. This schedule will continue to be refined throughout the project. The schedule identifies all activities needed to shutdown IDMS, convert IDMS data and implement START. To date, we have identified over 450 tasks. In addition, the team is working with the Database Administration lead to identify the database, security and Teale Data Center activities to be incorporated into the schedule.

START Downtime activities have been developed by the Downtime Team. A START external communication plan has been developed and presented to the Executive Staff. Downtime backlog estimates have been developed and will be reviewed by Executive Staff and Division Chiefs.

Work Authorization

Work Authorization for design and development for $117,789 was completed.

Issues

- The completion of the Critical Milestones within the specified timeframes is at issue due to the scope of the work and the key resources available. The implementation of START will be after the completion of the Annual Update and generation of Members Annual Statement of Account. The "Go Live" date for START was in November/December 2000 timeframe. Based on the reassessment of critical milestones the implementation of START is now targeted for December 2000.

- Potential cost increases due to the conversion of data at the Teale Data Center or unidentified system changes that may result from conversion or testing.

Please see the attached monthly status report from the Oversight Consultant, Science Applications International Corporation (SAIC) (Attachment A) and WorldGroup (Attachment B). SAIC has provided metrics of measurable project factors, such as change requests, issues resolution and incident tracking.

Mr. Jim Mosman
CEO, CALSTRS
7667 Folsom Blvd
PO Box 15275
Sacramento, CA 95851-0275

August 11, 2000

Dear Mr. Mosman:

The following represents SAIC's monthly START Oversight status report for June 20, 2000 through August 11, 2000. Included in the report is a summary of activities for the period, a discussion of the status of the project, an updated summary of risks and mitigation activities associated with the project and project metrics for START. Progress is being carefully tracked. Milestones toward meeting implementation for the December first allowance roll appear to be falling slightly behind. Testing and conversion remain major risk areas.

Conversion has encountered several serious problems in dealing with data from the IDMS system. It is anticipated that as conversion moves through benefit stream processing other areas of concern may be encountered. Both the IT and business staffs are working to develop ways to deal with the problem data, however, delays in the conversion process have occurred. The Cal-STRS teams are all working to develop contingencies to be able to deal with additional problems that may be encountered and to make up some of the time lost caused to delays. Once the conversion team has completed all levels of the conversion process in the Pre-Trial run, there can be a much more accurate estimate of the time that will be required to complete the conversion process. This information should be available at the end of August.

Another key risk area is related to completing test of the Reporting area. In conducting testing, it was found that IDMS included some pre-processing programs that were not identified in the START requirements. Programs have been written to replace this processing and testing is progressing, but the team is currently behind schedule. Early results indicate that the addition of the pre-processing programs have resolved key issues, however, much testing of this area remains to be completed. In addition, the test team requires converted data to complete some portions of its testing processes. Current estimates place significant testing completed in mid-September.

Cal-STRS staff continues planning for implementation, with progress being made in planning for workarounds, training, maintenance strategy and implementation/production.

An effective process to control the change requests for the system is in place. Some change requests have been identified that require program/design change, although an extensive effort is made to find workarounds in lieu of program changes, particularly in the areas where data

changes could significantly impact the conversion effort. Pending legislative issues are being carefully monitored by staff to determine when best to implement the changes without impacting the go-live date.

The risk matrix for the program has been carefully reviewed and updated to better reflect the current status of the program. Changes are noted using standard edit markings.

In summary, there are some areas of significant concern. There are also, however, numerous positive results that indicate the system will meet Cal-STRS needs and will likely be able to be implemented at the end of the year. All teams are working diligently to meet an implementation at the earliest possible date and in developing creative alternatives and contingency plans to ensure a successful implementation at the earliest possible date.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Laura J. Metzger
Vice-President
Manager, START Oversight Project

START OVERSIGHT REPORT

September, 2000

Science Applications International Corporation
Systems Integration and Support Division
10260 Campus Point Drive
San Diego, CA 92121

START OVERSIGHT STATUS

Summary of Oversight Activities:

SAIC has performed the following oversight activities for the CalSTRS START project in the July through August time frame:

- Attended various project status meetings
- Prepared CalSTRS board materials
- Compiled project metric data
- Reviewed status of development, conversion, testing and implementation efforts
- Assisted in development of a START maintenance strategy

Key START Oversight Issues

SAIC has identified the following key issues for START and is actively tracking the status of each issue area. A description of each issue is provided on the following pages and is updated on a monthly basis.

- Status of CIR development efforts and incident fixes;
- Resolution of data conversion issues to ensure the conversion effort remains on schedule;
- Status of testing effort relative to plan
- Management of implementation effort relative to plan

STATUS OF CIR DEVELOPMENT EFFORTS AND INCIDENT FIXES

~~SPL has provided a schedule for delivery of CIR software, which shows Cal-STRS receiving all software in June, 2000. Resource issues associated with prioritization of conversion, incident fixes and C IR development work that SPL is addressing remain.~~ SPL has completed delivery of software required for implementation. They are actively working on changes identified during testing and on CIRs that will be required shortly after implementation to meet leg islative changes. At present, software delivery is not a key factor in meeting scheduled implementation.

~~The resolution of Critical and High incidents is slightly behind plan; Medium incident resolution is below plan. While testing has been active, the d iscovery rate of incidents is falling off, which is consistent with the stage of the project we are currently in. Metrics, including incident closure, will be carefully monitored to ensure that as testing progresses this trend in incident fixes continutes . With the completion of the SPL allowable exception programs for conversion, additional resources will be available to close open incidents.~~ Problem resolution is largely on track. There are open critical, high, and medium incidents that need to be resol ved, but these incidents are not causing delays in completion of testing. Cal-STRS will continue tracking the number of open incidents and the success of resolving incidents to ensure that this does not become a problem in coming months.

A process has been put together where the test team prioritizes the critical/high incidents to ensure that the ones that are most impacting test progress can be dealt with on a higher priority..There are some discrepancies, as expected, between CalSTRS and SPL on incidents that are in and out of scope (i.e., those that require a CIR because they are new requirements and those that are not implemented per the specification). This is a particularly important issue where there are ambiguities in the specification. SPL and CalSTRS have implemented a review and escalation process to ensure that issues are quickly brought to closure and decided upon at the appropriate management levels. SPL has also offered to have a person at Cal-STRS who can help resolve mis-reported incidents.

Project metrics are being tracked and are provided at the end of this report.

STATUS OF THE CONVERSION EFFORT

~~The conversion team has completed a detailed conversion work plan, which has been reviewed by the START. The plan has been updated to reflect new schedules for delivery of allowable exception processing. The Conversion Team is dependent upon timely delivery of the software changes for Allowable Exceptions from SPL to meet their schedule for conducting a Trial Run. Metrics associated with conversion progress are included in this report. While milestones have been met to-date, significant milestones exist in July that will require substantial effort to complete. The next major milestone is to complete a pre-trial run, which is scheduled for July 28, 2000.~~

~~CalSTRS has placed the data design under formal configuration control to ensure that the conversion team is aware of any data format changes that are made and to assess to the impact of these changes on the conversion effort. The Conversion team must have insight into the potential data changes that each outstanding CIR has on conversion.~~

~~Conversion is working at Level 7 of the Conversion hierarchy, which involves conversion of benefit stream data. Data problems are being encountered and resolution of the problems are being addressed by CalSTRS staff. Data problems are also being encountered in testing that impact the ability of some testers to move forward. The testing data issues will be resolved when actual converted data is able to be deployed. SPL and CalSTRS must continue to work closely to resolve issues in an expeditious manner.~~

The key issue associated with conversion is currently the identification of data in IDMS that does not meet the stricter data integrity rules in the START system. Both IT and the business units are working to resolve issues associated with problem data, but the resolution of these problems can take time to resolve. Because the data problems are delaying moving through the Pre-Trial Run execution of the conversion process, the test team has been delayed in completing their testing with converted data. The Conversion Team is looking at various alternatives to resolve these problems. They are also currently running the Pre-Trial and Trial 1 conversion efforts in parallel, hoping to resolve issues in Pre-Trial Run before they significantly impact other Trial Runs.

The methodology being used for conversion will, when successfully completed, cause early identification of many data problems that are often found later in the implementation process. Contingency plans are being developed to handle how data problems that can not be resolved might be handled in a way as to minimize impact on the implementation date. Such contingencies, however, must be sound and cost effective to the organization to implement.

STATUS OF TESTING EFFORT

~~A detailed tactical plan has been developed. The test team has rebaselined their schedule to reflect the new timeframe and, therefore, is much more on track than previously. Key subsystems that require attention have been identified and corrective action is being taken to get the effort on schedule. Regression testing progress must also be carefully monitored – new metrics are being developed that provide more insight into pr ogress in this important area. Progress in this area must, be carefully monitored, as failure to complete testing according to plan could result in a delay of implementation. A major milestone to complete the first pass of test execution for both subsystem and integration testing at the end of June appears to be on target.~~

~~Workflows, which form the basis of the system level testing effort, have been completed and are being approved by the CalSTRS operational units. It is imperative to ensure consistency between the workflows and the specifications, and to identify any discrepancies so they can be resolved as early as possible.~~

~~Metric data associated with testing is provided in the metric portion of this report. The need to create and manage test data remains a major risk area. Strategies for test data management have been developed and are in the process of being implemented. Failure to provide a strong test data environment will impact the ability of the organization to successfully complete the testing process.~~

~~A test readiness report has been completed and has been reviewed by staff. Key risk areas identified in the report include Letter Generation and Report Interaction. A plan for testing with converted data has also been developed and is being reviewed.~~

The test team is progressing in both the subsystem and integration areas. Due to delays in conversion, however, the team is behind schedule in completing testing related to converted data. They are also delayed in testing the Reporting process es due to late identification of reporting pre-processing programs that were required for successful execution. These issues are being resolved.

Testing is also carefully monitoring progress in regression testing and are staying fairly current with testing of changes as problems are resolved. This metric must be carefully monitored to ensure that workload to complete testing prior to implementation can be met.

MANAGEMENT OF IMPLEMENTATION EFFORTS

Considerable progress has been achieved in the development of an implementation strategy. Tasks have been identified with associated responsibilities documented. Points of contact for each CALSTRS organization are being assigned responsibility for the acceptance activities. The individual teams will then produce resource needs as well as timelines. CALSTRS will then have an opportunity to ensure that they can meet staffing requirements and make plans to add staff, if necessary.

The joint START workplan for implementation is being developed. Staff has been assigned to further refine the implementation plan and support development of this overall START project and implementation plan.

A draft Maintenance Strategy has been developed and work is continuing on the development of the Maintenance Plan. SPL should be involved in reviewing this strategy. A detailed staffing plan has been developed and is being reviewed by Cal-STRS management. The Maintenance Strategy has developed an approach that includes process improvements in the general delivery of IT services as well as in the technology changes that are required for the new START system software maintenance. This strategy has incorporated many of the quality assurance and process improvements that have been developed as part of the START development effort.

A team has been assembled to determine the Downtime Plan. A draft document has been produced and has been reviewed by management. The plan has been enhanced to include "inch-stone" management of events during a 90-day period surrounding the implementation period.

The START Training program is being developed. Resource issues are being addressed to ensure that the training team has access to key staff (i.e., system experts) to complete training materials. Metrics related to training progress will be included in future board reports.

PROJECT RISK SUMMARY

The following table describes the overall risks associated with the START project. Risks are always present and unavoidable in any software development project. Risk management is an important part of the project management process, as it helps the project manager foresee potential problems before they occur. Mitigation strategies can be put in place to deal with risks before they become problems.

The following risk summary table identifies key START risks, defines the impact of the risk if it were to become a problem, assigns a probability of the risk occurring, describes the risk and identifies mitigation strategies or recommended actions that could help avoid the realization of the risk. Risk impact levels are defined as follows:

- High: If not addressed, there could be severe impact to the project success due to unacceptable schedule slip, cost impact or quality of product
- Medium: If not addressed, there could be significant impact to the project success due to unacceptable schedule slip, cost impact or quality of product
- Low: If not addressed, there could be some impact to the project success due to unacceptable schedule slip, cost impact or quality of product

Probability of risk is defined as follows:

- High: Mitigation measures do not seem sufficient to overcome the risk or the risk is already being dealt with as an issue on the project
- Medium: Mitigation measures are being followed and appear to be successful, but the risk threatens to become an issue
- Low: Mitigation measures are in place and the risk appears to be well controlled at this point in the project.

Changes to the risk summary table that have been made since the last delivery of this report are denoted with standard editing marks. This should facilitate review of the material.

Some risks have been removed from the table, as they no longer represent risks to the project. These items are marked as deleted in this version. They not be included in subsequent risk tables.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
Project completion not on schedule.	High	High	~~The date for complete software delivery, including outstanding CIRs is planned for March, 2000. Issue resolution and associated re-design has impacted the ability to deliver software on time.~~	The implemenation date has been moved to December, 2000 based on the currently planned delivery dates. Bi-weekly meetings are held with all team leads to evaluate status of the program based on analysis of metrics toward meeting milestones.	The START teams have revised plans to reflect the new implementation schedule And bi-weekly meetings are being held to track progress to meeting the milestone plans. A team comprised of the SPL project manager, the test manager, the conversion manager, and the oversight manager meet each month before the planned START management meeting to review project status and discuss impact of any schedule changes.
				~~A consolidated CALSTRS conversion, testing, and implementation schedule has been developed to ensure that adequate staff resource exist to meet planned implementation date~~ A change control board has been developed to ensure CIRs are minimized to the maximum extent possible.~~.~~	~~All major issues have been discussed and resolution has been reflected in the new specification releases. Conversion and testing progress must be tracked carefully to ensure schedules are maintained..~~ CIRs are being kept to a minimum. A careful review is made to determine workarounds wherever possible.
			Delays in conversion and testing could cause delay in final implementation.	The current system can continue to operate until START is ready for implementation. The old system will be a fallback method.	Regular reviews of progress of conversion and testing held. Contingency plans being developed to avoid any unnecessary delays.
			User acceptance could cause delay of implementation.	Users could delay system implementation if they do not accept workarounds.	The implementation team is working with users to explain workarounds and ensure that users understand system changes.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
Legislative Changes impact ability to implement.	High	Med		Implement formal program management reviews to ensure the schedule accurately reflects the development effort.	There are legislative changes that must be implemented in early 2001, causing some resource issues with system experts and testing.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
Project completion not on budget.	Med	High	Since the project is taking considerably longer than anticipated there are budgetary concerns to be addressed. Recently approved project budget addressed known concerns.	Since this is a fixed price contract, control of system changes can be used to control project costs.	The improved change management process will provide CALSTRS with an improved means for tracking cost impacts due to changes. Some enhancements to the process may be required and are being considered as part of a continual process improvement effort.
				Costs for testing and conversion (CALSTRS activities) may be greater than anticipated and require more resources. Teale Data Center costs may be impacted.	~~Detailed project plans are being developed and reviewed by the START project office to determine impact. CalSTRS is finding that programmers are being released from Y2k Project and they are able to get personnel at lower than expected cost.~~ Teale Data Center costs are being carefully monitored and care is taken to ensure that conversion and testing activities do not add to Teale Costs any further than necessary. Additional team members have been added to the implementation, conversion and testing efforts when possible to meet critical milestones.
Operational Cost of START Exceeds Current Plans	Med	High	Processing costs associated with the new program are greater than those associated with IDMS, causing additional IT resource requirements.	Perform analysis to determine cost issues Develop budget requirements for FY01 processing.	Costs associated with START processing are being analyzed and, where possible, the development team is implementing changes that improve performance. Based on analysis of operations, a budget is being developed.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
Staffing will not be available to support implementation and operation and maintenance of the system.	~~Med~~ High	Med	CalSTRS will need adequate staff to develop operational processes for implementation	A model office process is planned, where implementation is piloted prior to the actual go-live date to ensure adequate batch processes and implementation needs are met. ~~CALSTRS has had difficulty staffing for conversion, and may be requiring additional staff for testing and implementation. CALSTRS must identify staffing requirements early to allow for hiring of staff or consultants to support effort.~~ Operation and maintenance staff will be required to support the system following implementation. Adequate staff from Core START, business users and IT staff required to support system implementation. ~~The system experts are in the criti cal path for issue resolution, conversion,~~	A lead for model office has been added to the team. Milestones for completing model office activities are tracked in the bi-weekly metric meetings. ~~Conversion staffing has been successfully completed. Contract allows CALSTRS to use T&M contracting for support services. This could be applied for operation and maintenance. CalSTRS hiring additional test resources. Staffing requirements for system maintenance have been defined.~~ The development contractor will be performing warranty and a maintenance contract is being executed with them to ensure support of the system during the warranty period. Maintenance processes are being developed to help ensure knowledge transfer to Cal-STRS IT staff during this period. An implementation plan is developed and being executed to ensure that implementation tasks are planned and executed. IT staff, business users and core START team members are actively involved in the planning and execution of implementation tasks. ~~The START project office has hired a person to coordinate system expert~~

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
				~~testing and implementation~~ .	~~schedules and consolidated reporting of the experts to START. CALSTRS management will need to be responsive to needs of the system experts to ensure project schedules can be met.~~
CALSTRS work flows are significantly impacted by the new system, causing problems in acceptance and post-implementation.	Med	Low	Any new IT system requires that work flows be examined to ensure the system can operate in the current work flow, or that work flows are changed to reflect capabilities of the new system.	The START system has been designed to minimize the impact on day to day work flow. The testing effort should verify that all work flows can be completed and that the necessary controls are in place to effectively operate the system. The workflow development and planned system acceptance strategy also addresses this issue in the next months.	Work flows have been documented and changes discussed with business units. Workarounds, where needed, have also been identified and approved by the business units. Where issues are addressed with work arounds, changes have been identified for future (post implementation) releases of START. ~~A task for defining work flows to determine a critical path for the system completed and workflows have been reviewed for approval by staff. While some work flow issues have been identified in this effort, no major problems have been identified. Analysis of overall workflow and system performance impact is being considered.~~ System experts have been made aware of the need to include these considerations in their test procedures. ~~System experts are currently working with the test team to develop process flows that will be used for generation of system test scripts. As these flows are developed, CALSTRS should be able to identify problems and seek resolution. A review of workflow to requirements in the specification should be conducted to ensure there the workflows accurately reflect the specifications.~~ A workaround plan has been developed, and

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
					presently workarounds are accepted, with changes planned for post-implementation release of START.
				Audit procedures must be reviewed to ensure compliant operation of the system and of conversion.	~~An EDP Auditor has been hired to support the CALSTRS Audit organization in definition/verification of audit processes. Initial strategies for audit of the conversion process are being developed through reconciliation processes.~~ Improved controls have been added to START that help ensure data and process integrity. Audit should review these controls to ensure they are adequate to meet CAL-STRS needs.
				Training should address possible changes in workflow processing, where applicable.	Address necessary workarounds and stress system differences in the training sessions. Training needs access to Cal-STRS personnel to document these workarounds.
START functionality does not meet CALSTRS needs	High	Lov	Any new IT system runs the risk of not meeting user needs.	Ensure users should be involved in requirements effort.	CALSTRS has invested significant resources to ensure that users of the system understand what is being developed and to ensure that it meets operational needs.
				Specifications must detail planned functionality and be reviewed by the user team.	Completion of specifications and approval of the design minimizes this risk.
				Acceptance test criteria must be specified.	User acceptance criteria has been defined and the operational units will be responsible for accepting the system, based on a defined process.
				A process is used to ensure capture of requirements issues for resolution in	The CIR process has been updated to ensure that issues identified in testing (and post-

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
				post-START implementation deliveries.	implementation) are documented and can be included as updates to future releases of the system.
~~CALSTRS has inadequate staff resources to implement test strategy.~~Testing can not be completed on time	~~Med~~ High	~~Med~~ High	Regression testing must be kept current to ensure that problems are corrected and that other portions of the system were not impacted by a change. Regression testing is performed by same testing staff.~~Testing will be a major component of the system implementation effort. This effort will require significant CALSTRS resources. There are significant ramifications in terms of SPL payment and system deployment if there are inadequate resources to test the system in a timely manner.~~	A test team comprised of a combination of contractor and CAL-STRS user staff has been put in place. The test plan includes regression testing. ~~Begin addressing staffing needs early, based on the detailed test plan.~~ ~~Involve users in the testing and acceptance of the system.~~ Converted data is required to complete converted data testing.	CALSTRS has hired an experienced testing consultant to manage and plan the testing effort. The test team is also staffed with CAL-STRS business unit staff. ~~The test team is working with the organization al unit to define staffing requirements and determine support levels required.~~ Contingency plans are being developed that address potential resource constraints. Additional test staff is being hired. Careful monitoring of test progress is critical to ensuring on-time implementation. ~~A core CALSTRS test team has been formed that includes system experts and IT staff to support planning and coordination of the test effort.~~ Delays in conversion have impacted the ability of the test team to complete converted data testing. Plans for using a subset of converted data are being executed to identify potential problems as early as possible..
Data in current system not able to be converted correctly.	High	High	There may be data in the current system that is not stored in the new system. Also, there may be data in the new system that is not supported in the old system. There is also a concern that validation criteria in the	Define conversion strategy. ~~A conversion work plan must be completed to determine feasibility of the conversion being completed within the necessary schedule.~~	The conversion strategy has been jointly developed by CALSTRS and SPL and should provide a workable approach. Trial runs are identifying problem data and business units and IT staff are working to resolve the issues.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
			new system may not be met by the old data.		Contingency plans are being developed to find ways to resolve problems ~~without~~ without seriously impacting implementation.
			Data problems exist in IDMS that can not pass the error checking processing in the START system. Data cleanup is required to load data into START.	A process has been developed to identify problem data and resolve issues as quickly as possible. The START conversion team, IT and user community work together to develop an effective solution for the data problem.	Data problems are in the process of being resolved. Conversion still has additional conversion tiers to complete before most problems will be identified. Trial runs should identify most issues prior to actual conversion. Reconciliation and converted data testing will help ensure success of data cleanup activities. ~~Both gradual and "big bang" approaches were considered. The strategy is currently being excercised as the pre-trial runs are being performed with a high degree of success. Conversion programs are being run to identify problems. A trial run is planned in February.~~ ~~A work plan has been revised, and is being used to track progress of the effort~~.
				Audit procedures are needed to verify processes for conversion and to validate data conversion.	An EDP Auditor has been hired and is in the process of developing a strategy for auditing the conversion processes and defining reconciliation processes. ~~This issue has not been addressed directly. The item will be considered during reconciliation.~~ A reconciliation team has been formed and is developing programs to support the reconciliation efforts.

Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
Ability to convert and go live can not be completed in available timeframe.	High	Med	There is a significant effort required to convert existing data and to verify that conversion is accurate. There is a limited window in which to perform this task to ensure clients receive benefits checks on time.	~~Develop detailed plan for crossover in conversion plan.~~Trial runs are conducted to allow for analysis of the time period to convert.	This area is being addressed in the Trial Runs. Strategy should be piloted and proof of concept performed/ trialed prior to actual cut-over. The conversion strategy is working carefully on the time it takes to actually convert data and trying to make it as efficient as possible.
CALSTRS staff can not maintain the system following delivery	Med	~~Low~~ Med	Technology transfer is an integral part of the project. CALSTRS staff must be able to understand how to operate and maintain the system following acceptance and delivery.	Provide contractual means for providing technical support following completion of system development. Provide technical documentation with the system.	A T&M item is included in the contract to allow for technical support by SPL following system acceptance. A statement of work for a separate vehicle is being developed for a maintenance contract that will address post-implementation maintenance activities that are beyond warranty issues. Scope of services and contract vehicle are being defined. To contain costs and schedule, the current effort requires SPL to generate only external specification documentation. Internal specifications are provided at a lesser level, with SPL providing notes, but not providing formal deliverables. Technology transfer opportunities are provided to offset some of the limitations on documentation. The CALSTRS IS team has provided standardization guidelines to SPL and SPL has agreed to meet them. Technical interchange meetings could be conducted that would assist the START conversion and test team in better understanding some technical issues withoug increasing the need

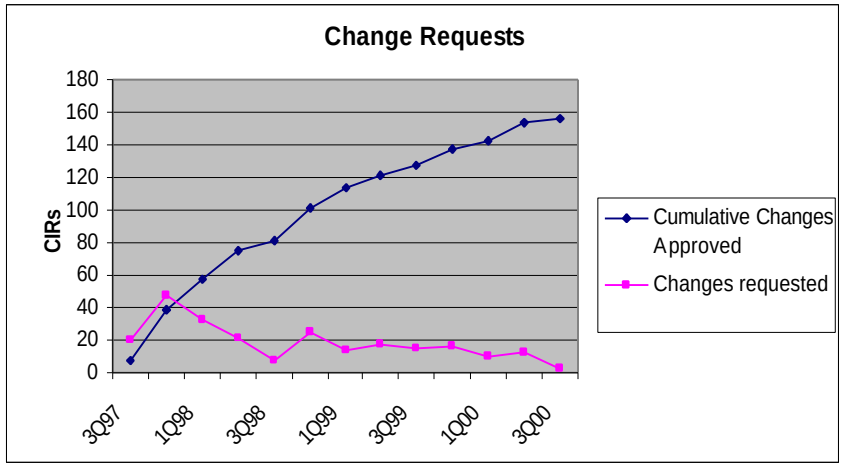
Risk	Impact	Prob Occur	Description of Risk	Mitigation Strategies/ Recommended Activities	Status of Mitigation Activities
				Develop Maintenance Strategy/Plan	for documentation. ITSD has formed a team and has selected a consultant services to support development of a maintenance strategy plan for START. A draft release has been completed and the Team is continuing to update the strategy and develop a plan. Near-term effort needs to concentrate on process definition for correction of fixes and production releases.
Users can't operate the System	High	Low	START system will be new and require adequate training of staff prior to "go live", but sufficiently close to cutover that users remember how to operate the system.	Include training with delivery of the system just prior to "go live". Involve users in early use of the system.	Training is provided for in the current contract and is being considered in the overall implementation plan. Users organizations will have opportunities to see how the system operates in the testing efforts. Many users will have direct experience with the system through these activities.

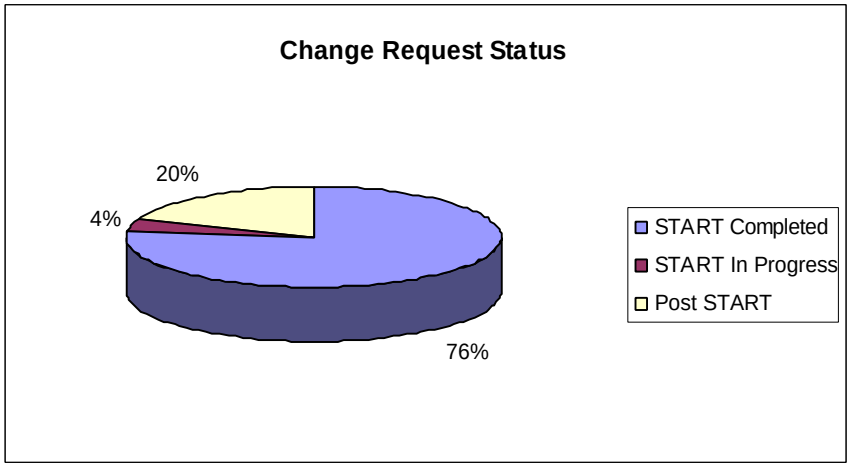
START PROJECT METRICS

Using metrics, project progress is measured through the completion of activities on the project schedule. Progress indicators are used to monitor progress in terms of task completion and task output. The difference between the planned and actual completions is an indication of project adherence to the plan. This type of progress monitoring is currently being conducted. In addition to the planned versus actual indicators, START project monitors trends in the rate of progress.

Trends in the number of change initiation requests

This chart shows the current total number of Change Initiation Requests (CIRs) over time and the number of changes requested each quarter. CIRs represent requirement changes and typically have an impact on both cost and schedule. Ideally CIRs are resolved in the early stages of a project and there should not be significant growth in the number of CIRs in the later stages of a software development effort. The Change Request Status reveals that many of the change requests have been completed or postponed. Only a small portion will need to be completed before the end of START.

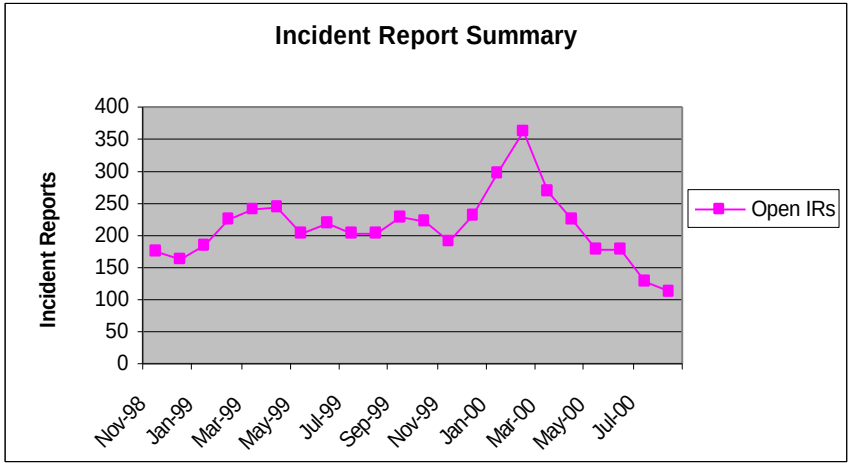


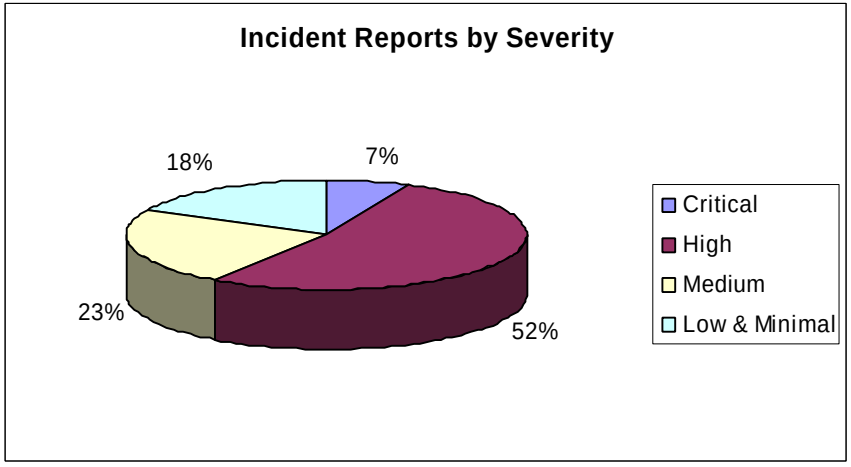


Trends in the number of Incident Reports

An incident report is a document used to recognize record, track, and close anomalies detected in the software and its accompanying documentation. Incident reports provide an indication of the quality of the product not only by their number, but also by the rate at which they are written. The number of incident reports also reflects the amount of rework that may be expected. This metric provides managers with insight into the quality of the product, the software reliability, and the effectiveness of testing.

The graph shows the overall trend in the number of open incident reports. Ideally, as testing progresses, it takes the test team longer and longer to discover new problems because early testing discovers more common defects. As system testing has continued the number of incident reports in the Critical & High and Medium severity categories has grown to 82% of incidents, but the total number has decreased. However, the large number of Critical and High incidents, indicate that extra time and effort may be needed to correct these errors.



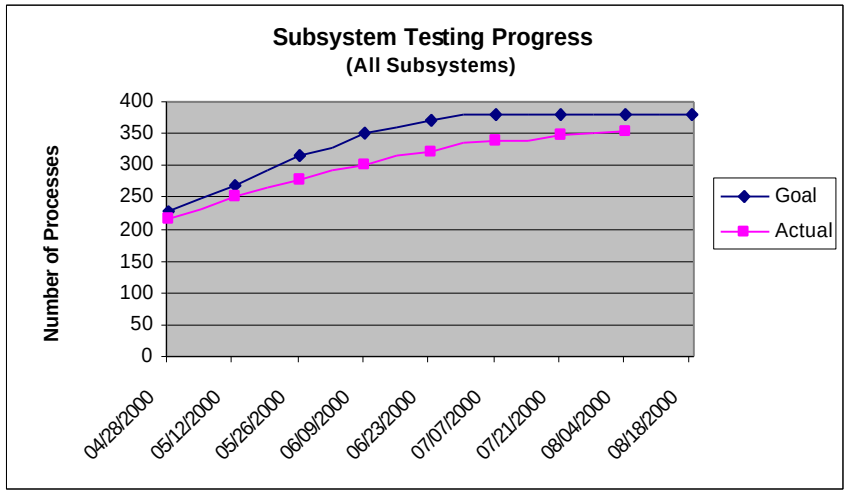


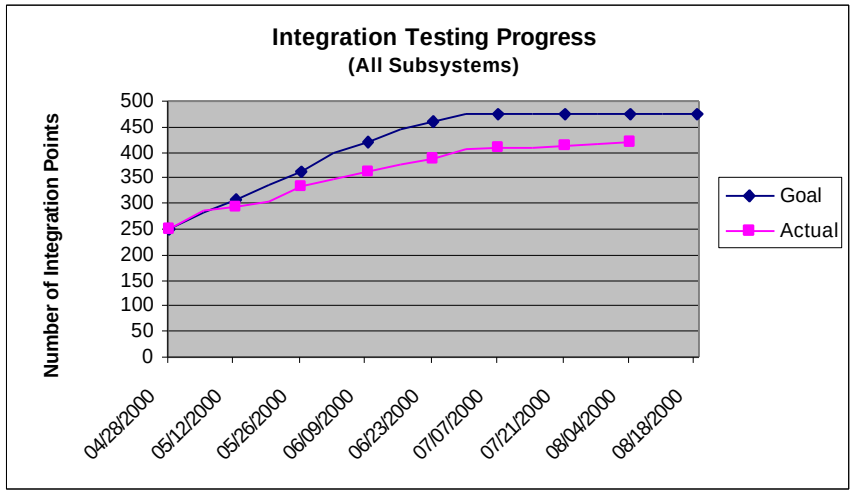
Trends in Testing: Test Script Execution

The Test Script Execution metric reveals the progress of the test team in executing tests to completion.

Subsystemand Integration Testing

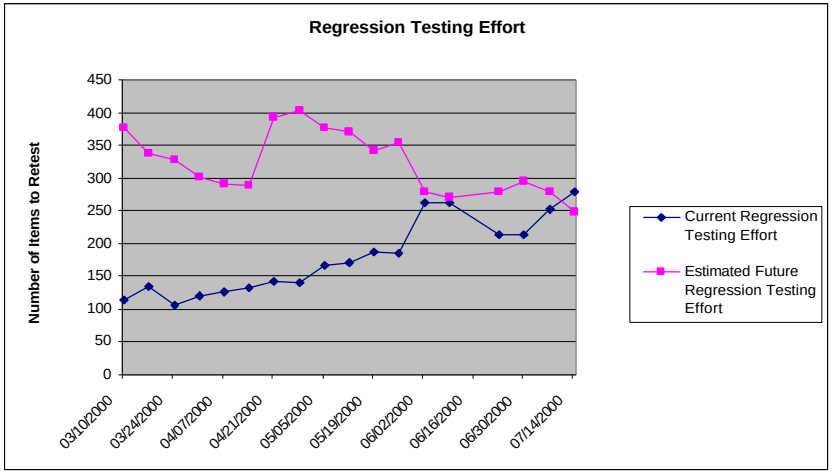
The results at this time show the test teamis coming close to completing all subsystem and integration testing. One hundered percent of all tests have been started, and the tests that remaining will be used to verify that incidents have been corrected





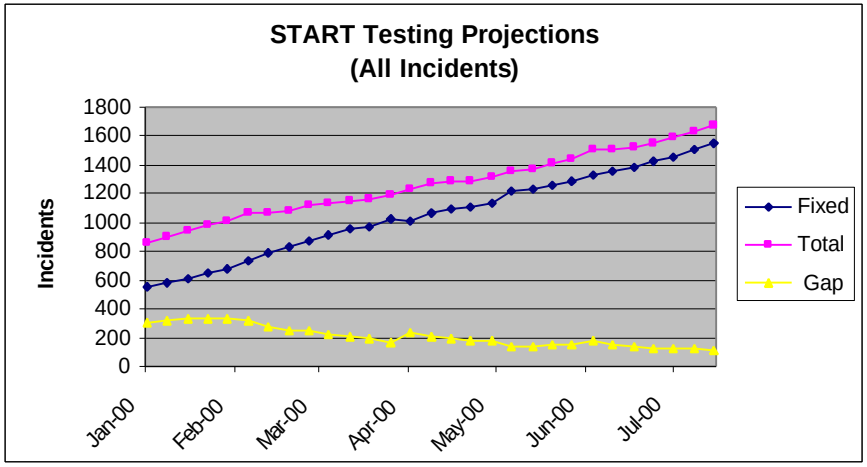
Regression Testing

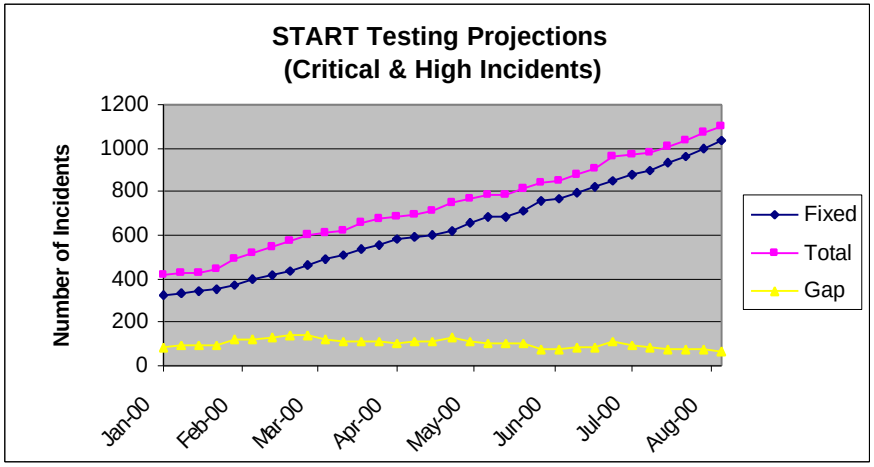
Regression testing is used to verify the correctness of software changes and search for side effects as a result of software changes. The changes tested are a result of both incident corrections and change request implementations. Regression testing completes a subset of previously executed tests, which is in proportion to the scope and impact of the change. Currently, all fixes that have been provided by SPL are in regression testing, and the estimated future regression testing is based on the number of incident corrections or changes that SPL still must deliver.



Trends in Testing: Projected Test Results

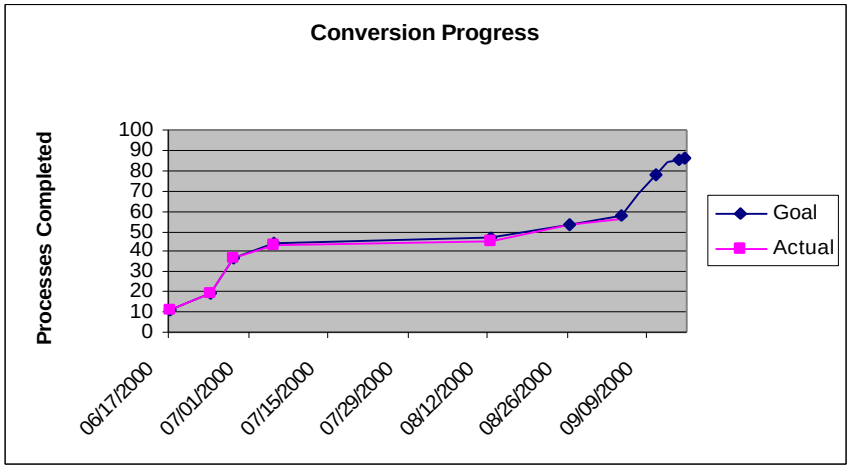
The Project Test Results summary indicates the expected future progress of the testing team in executing test scripts for deliverables. A projection of incidents and their fixes is determined based on the historical discovery rate and fix rate in the START project. Comparing the projected gap between incident discovery and fixes shows that the gap is decreasing; thus, the team is projected to continue fixing incidents faster than discovering incidents, which is expected as testing continues.





Conversion Program Development Status

This metric is intended to provide insight into the status of the effort to develop conversion programs. For most data elements, a program must be written to extract data from the IDMS database and transfer the data elements to the proper elements of the new START database. This metric does not address actual data conversion. A metric will be added at a later time for that status In the development of the conversion programs, the conversion team requires system expert time to help identify the method that will be used to resolve data issues.



SPL WORLDGROUP CONSULTING

START PROJECT STATUS

June and July, 2000

OVERVIEW

One Lead Analyst remains focused on assisting the CalSTRS Conversion Team in establishing the initial START database. The remainder of the team is focused on the analysis and repair of Incidents reported by the CalSTRS Testing Team, as well as the delivery of the remaining Change Orders and analysis of proposed legislation as requested by CalSTRS.

PLANNED VS. ACTUAL

WORK COMPLETED THESE TWO MONTHS
Nearly four hundred Incidents were resolved over the last two months , and thirty-two Conversion Override Requests have been investigated, discussed, and implemented. In addition, seven Change Orders were delivered.

WORK NOW IN PROGRESS
In addition to researching the remaining Conversion requests, the team is also involved in analyzing the impact of proposed Legislation. This is a joint effort for CalSTRS and WorldGroup, and is a formidable task in view of the many bills being put forward.

We continue to maintain our progress in addressing the Incidents raised by the Testing Team. We are fixing them faster than they are being reported, so the number remaining open is still diminishing. We expect this trend to continue over the next few months in preparation for final implementation..

WORK SCHEDULED TO BE COMPLETED NEXT MONTH
Eight small Change Orders are to be delivered in August, along with several of the remaining Letters and the final Planning and Actuarial Extract.

MILESTONES (Project Deliverables)

OVERALL PROJECT SCHEDULE
With the delivery of the final Planning and Actuarial Extract, we have completed the delivery of all 2400 items from the original contract!. We are now working on Change Orders and Legislation.

THOSE COMPLETED THESE MONTHS
Planning and Actuarial ‘s Extract, some remaining Letters and seven Change Orders delivered

THOSE PLANNED FOR THESE MONTHS BUT NOT MET, WITH NEW DATES
None.

PLANNED FOR NEXT MONTH

CHANGE ORDERS

CHANGE ORDERS INITIATED THIS MONTH
Nine new Change Orders were initiated during June/July.

CHANGE ORDERS APPROVED THIS MONTH AND ASSOCIATED DOLLARS
Eight Change Orders were approved this month with a dollar value of $204,000.

TOTAL VALUE OF CHANGE ORDERS INITIATED FOR THE PROJECT
$4,417,641.

ISSUES

None to report.